

ABSTRACT

CELL MULTIPLEXER FOR VARIABLE SPEED NETWORK INTERFACES

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A programmable timer is used to meter ATM cells from input buffers to an output buffer in a cell multiplexer of an integrated access device. The timer is programmed according to the egress rate from the cell multiplexer, which is determined by the physical network interface. The programmable timer generates a cell read period that enables an arbiter to read a cell from an input buffer to the output buffer. The cell read period is sufficiently long to avoid overfilling the output buffer or bursting to the network interface. In a particular embodiment a high-priority input and a lower-priority input and the arbiter always checks and reads from the high-priority input before reading from the lower-priority input. In a further embodiment, the high-priority input has an ingress rate that is less than the egress rate.